Adv. Math. Econ. 6, 167-183 (2004)

Advances in MATHEMATICAL ECONOMICS

Monetary equilibrium with buying and selling price spread without transactions costs

Akira Yamazaki

Graduate School of Economics, Hitotsubashi University, Kunitachi, Tokyo, 186-8601, Japan

Received: July 22, 2003
Revised: October 8, 2003

JEL classification: D51, E40

Mathematical Subject Classification (2000): 91 B

Abstract. This paper is concerned with the Hahn problem in a general monetary equilibrium model at the terminal period. Under the assumption that an initial endowment allocation is not Pareto optimal it is proved that an equilibrium with a positive value of money exists if traders take buying and selling prices of commodities as given even if transactions costs are not explicitly required in the buying and selling activities of traders in commodity markets.

This result seems to suggest two interpretations. One is that a standard monetary equilibrium concept must be strengthened so as to explicitly require an arbitrage-free property of bid-ask spreads of commodity prices vis-à-vis transactions costs. The second interpretation is that a model in which traders take distinct buying and selling prices as given although no transactions costs are required can be thought of as a way to make tax payments required by an external authority in classical papers endogenous in the form of an indirect taxation.

Key words: general equilibrium model, monetary equilibrium, Hahn problem, buying and selling price spread; transactions costs